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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,605

11/21/2003

Henricus A. Marquering

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EXAMINER

BLOOM, NATHAN J

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE DELIVERY MODE

07/10/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,605	<b>Applicant(s)</b> MARQUERING ET AL.	
	<b>Examiner</b> NATHAN BLOOM	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-23 is/are rejected.
- 7) ☒ Claim(s) 10,11,24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date _____.<br>5) <input type="checkbox"/> Notice of Informal Patent Application<br>6) <input type="checkbox"/> Other: _____. |
|---|---|

### **DETAILED ACTION**

Applicants' response to the last Office Action, filed on March 26<sup>th</sup>, 2008 has been entered and made of record.

#### ***Response to Arguments***

1. Applicant's arguments filed 03/28/2008 have been fully considered but they are not persuasive. See the discussion below.

Applicants argue in page 12 of the remarks that Anton has not shown contiguous fields. Figure 7 of Anton clearly shows rectangular fields that are contiguous (touching), and in figure 8 Anton shows contours generated from the segmentation method that are neighboring (contiguous) other fields.

#### ***Response to Amendment***

2. The amendment to claims 12-17 and 24 successfully corrects the aforementioned 35 U.S.C. 101 issue. Thus the 35 USC 101 rejection of these claims has been withdrawn.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Antonacopoulos (will be referred to as Anton, "Flexible Page Segmentation Using the Background").

Instant claim 1: A method of segmenting an image of pixels into a number of contiguous fields corresponding to lay-out elements of the image, the pixels having a value representing an intensity and/or color of a picture element, the method comprising:

constructing a graph having vertices and edges connecting the vertices, on the basis of background areas in the image, said graph edges corresponding to field separators that together delineate the contiguous fields of the image, wherein each pixel is comprised in one single field of the number of contiguous fields; *[Anton has disclosed in section 2 of the document a method that forms a series of vertices and edges around the elements of the page to be segmented and then traces the shortest path of these edges that enclose these elements. In particular section 2.3 contains details of the actual segmentation using the minimum (shortest) cycles that encircle areas that don not intersect. Furthermore, each line that encircles the element has a known length and thus the actual length of the cycle is known. As can be seen in figures 6-8 these contours are indeed the shortest cycle and are contiguous. The pixels in the images are not split between two fields, thus each pixel is comprised in one single field of the neighboring (contiguous) fields. (Note: The standard definition of contiguous means touching, neighboring, or adjacent.).]*

constructing a list of contiguous shortest cycles that together completely cover at least a part of the image, a shortest cycle being defined as a closed path from a vertex back to that same

vertex via the edges of the graph, that has the lowest sum of weights of edges of all possible closed paths from said vertex back to said vertex; and [See above and section 2.3 of Anton wherein the lists are disclosed.]

defining the shortest cycles of the list as the contiguous fields of the image. [As per the discussion above the shortest cycles are identified as fields of the image (all fields are contiguous).]

The rejection of claims 2-7 presented in the previous office action have been maintained in view of the current rejection of claims 1.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 12-15, and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonacopoulos.

The 35 USC 103(a) rejections of claims 9, 12-15, and 18-22 by Anton are maintained. See previous office action for details regarding these rejections.

7. Claims 8, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonacopoulos in further view of Ittner (EP 0621553 A2).

The 35 USC 103(a) rejections of claims 8, 12, and 16 by Anton in view of Ittner are maintained. See previous office action for details regarding these rejections.

8. Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anton in further view of Stolin (US 6175844).

The 35 USC 103(a) rejections of claims 17 and 23 by Anton in view of Stolin are maintained. See previous office action for details regarding these rejections.

#### *Allowable Subject Matter*

9. Claim 10-11 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The cited prior art does not sort the enclosed areas by size or the removal of an inner enclosed area from another enclosed area.

#### *Conclusion*

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Bloom whose telephone number is 571-272-9321. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehta Bhavesh, can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Brian Q Le/

Primary Examiner, Art Unit 2624